

24 January 2005

**Summary to date regarding ABB captive rearing and Ohio reintroduction efforts at
The Ohio State University Department of Entomology for 2005**

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23-24 June 2005

Pre-release survey conducted at Waterloo Wildlife Area, Athens Co., Ohio

Volunteer list: Richard Maxey
George Keeney

No overwintering ABB were recovered after a survey of 75 trap nights. Traps were recapped for use later in season.

28 June 2005

140 pairs of ABB released at Waterloo Wildlife Area, Athens Co., Ohio. 70 pairs were set up at the mowed site off of Trail 19 and the remaining 70 pairs were placed at a mowed site just off the road in the walk-in turkey site. 50 pair of ABB were provided for the release by the St. Louis Zoo. This stock was progeny based in part on 10 pairs given to the St. Louis Zoo by the OSU Dept. of Entomology.

Volunteer list:

Megan Seymour (USFWS)
Jeromy Applegate (USFWS)
Ken Lammers (USFWS)
Steve Shurter (The Wilds)
Patty Glaze (The Wilds)
Callie Robb (The Wilds)
Dave Swanson (ODNR)
Eli Young (ODNR)
Tim Baldwin (ODNR)
Danny Koch (St. Louis Zoo)
Bob Merz (St. Louis Zoo)
Randy Morgan (Cincinnati Zoo)
Lisa Misquitta (OSU)
Dick Maxey (OSU)

Dave Horn (OSU)
George Keeney (OSU)

Thanks to all who helped with the release.

13 July 2005

Post release burial/brooding success follow-up at Waterloo Wildlife Area, Athens Co., Ohio.

Volunteer list:

George Keeney

Upon inspection of the site, it was discovered that one or more scavengers had dug up a proportion of the quail carcasses despite using larger sections of poultry mesh. A larger mesh netting than usual had been over many of the burials this year and as a result, some scavengers were able to excavate some of the carcasses through the netting itself. (Another lesson learned.) Scavengers had dug up 17 of the 70 quail (24.3%) at the first site and 8 of 70 quail at the second site (11.4%). This is only second time (and the second consecutive year) that this has occurred at any of the Waterloo sites since we have been releasing ABB there, starting in 1998. Centering the screening over the carcass under the soil plug and not the soil plug itself apparently helped reduced the degree of scavenger disturbance.

16 burials (8 at each location) were carefully exhumed to check on degree of brooding success. 3 of the pilfered burials were also examined to verify that the carcasses were, in fact, gone. We decided not to exhume any more disturbed burials and concentrated on intact ones. Of the 8 checked at Site 1 (Trail 19), all burials examined had prepared carcasses but no larvae or adults were present with the brood balls. At Site 2, off the Turkey Walk-in Area, here are the results:

1. 4 3rd instar larvae, no adults present.
2. 8 3rd instar larvae, no adults present.
3. 12 3rd instar larvae, female and male present.
4. Carcass prepared, no larvae, no adults.
5. 11 3rd instar larvae, female present.
6. 8 3rd instar larvae, no adults.
7. Carcass not prepared, no larvae, no adults.
8. 12 3rd instar larvae, female present

Three live females and one live male were still present with their broods on 13 July.

We found a total of **55 larvae in these 16 burials**. This averaged to **3.4 larvae/burial**. We averaged 9.6 larvae/burial in 2004.

6 of 16 checked intact burials had brood (37.5% in 2005) (76% in 2004)

So given that there were **115 intact burials**, a very rough estimate of our clutch size is:
115 intact burials x 0.375 brooding success x 3.4 larvae/site = **146 larvae total**

Compare this to our brooding success in 2004...

56 intact burials x 0.76 brooding success x 9.6 larvae/site = **409 larvae total.**

In 2005, it appears that we were only able to produce about 35-36% of the beetles that we produced in our 2004 field releases.

There seems to be serious discrepancy between burial/carcass preparation and actual brooding success. There appears to be significant inbreeding depression beginning to take effect in our captive population as well and this may explain the lower brooding success in our field release this year. Excepting the 6 males received this year from St. Louis Zoo, we have not had any new genetic material introduced since colony establishment in 2002. Introduction of new males would not have addressed deleterious recessive genes, particularly sex-linked ones.

15-16 September 2005

Post- release survey conducted at Waterloo Wildlife Area, Athens Co., Ohio.

Volunteer list: Richard Maxey

George Keeney

One male ABB were recovered during a survey of 75 trap nights. This beetle was found on Transect 2, trap # 10 near Trail 30. Traps were recapped for use later use.

Summary of captive rearing at OSU for 2005 calendar year

Brood VIII

Total number of adult beetles produced = 24

Total number of female brood = 13

Total number of male brood = 11

Brood IX

Total number of adult beetles produced = 245

Total number of female brood = 114

Total number of male brood = 135

A total of 140 pairs were released at Waterloo Wildlife Area on 1 July 2004. The St. Louis Zoo provided 50 pair from their colony for the release. The remaining 90 pair was from Brood IX of The Ohio State University Department of Entomology colony.

Brood X

Total number of adult beetles produced = 26

Total number of female brood = 6

Total number of male brood = 20

Total brood production for 2004 = 295

Total female brood for 2004 = 133

Total male brood for 2004 = 166

Please forward this information to the appropriate distribution lists. If you have any questions, comments, or concerns, please feel free to contact me via my email/general contact info or Dave Horn @ horn.1@osu.edu. Thanks to all and I look forward to hearing from you soon.

Sincerely,

George Keeney
Dave Horn

Cc: File
Dave Horn
Carolyn Caldwell
Steve Shurter
Sarena Selbo
Angela Zimmerman
Foster Purrington
Richard Maxey
Jane Stevens
Pete Fasbender
Dave Swanson
Michael Amaral